

2
B-1
cm 2.

electrode pattern and being driven by a voltage signal to undergo expansion and compression movement to vibrationally drive the vibrating body, and a rotor disposed on the vibrating body for undergoing rotation about a longitudinal axis of the shaft in accordance with vibration of the vibrating body;

a transmission mechanism connected to the rotor for rotation therewith;

a moving body for undergoing linear movement in a direction crosswise to the longitudinal axis of the shaft in accordance with rotation of the transmission mechanism; and

a pressurizing mechanism for pressing the moving body into pressure contact with the transmission mechanism.

30. A linear motion mechanism according to claim 29; wherein the transmission mechanism includes a cam.

31. A linear motion mechanism according to claim 29; wherein the transmission mechanism includes a pinion.

32. A linear motion mechanism according to claim 29; wherein the transmission mechanism comprises a rack and a gear.

33. A linear motion mechanism according to claim 29; wherein the supersonic motor is mounted on a support

member; and further comprising a guide member mounted on the support member for guiding the linear movement of the moving body.

34. A linear motion mechanism according to claim 29; further comprising a detecting device for detecting an amount of linear movement of the moving body; and a control circuit for controlling a position of the moving body in accordance with the amount of linear movement detected by the detecting device.

35. An electronic device comprising: a linear motion mechanism according to claim 29; and a load member disposed on the moving body of the linear motion mechanism.

36. A linear motion mechanism comprising:

*Sub.
1/32*

a supersonic motor having a shaft, a vibrating body supported by the shaft, a piezoelectric element having an electrode pattern and being driven by a voltage signal to undergo expansion and compression movement to vibrationally drive the vibrating body, and a rotor disposed on the vibrating body for undergoing rotation about a longitudinal axis of the shaft in accordance with vibration of the vibrating body;

?

a transmission member connected to the rotor for rotation therewith, the transmission member having a tapered

Pub.
B2
Concl.

portion varying in thickness along a direction generally perpendicular to the longitudinal axis of the shaft;

a moving body for undergoing linear movement in a direction generally parallel to the longitudinal axis of the shaft in accordance with rotation of the transmission member; and

a pressurizing mechanism for pressing the moving body into pressure contact with the transmission member.

37. A linear motion mechanism according to claim 36; wherein the moving body has a projecting portion for contacting the tapered portion of the transmission member.

= 38. A linear motion mechanism according to claim 36; wherein the moving body has a tapered portion for contacting the tapered portion of the transmission member, the tapered portion of the moving body having a thickness which varies along a direction generally perpendicular to the longitudinal axis of the shaft.

39. A linear motion mechanism according to claim 36; wherein the supersonic motor is mounted on a support member; and further comprising a guide member mounted on the support member for guiding the linear movement of the moving body.

40. A linear motion mechanism according to claim 36; further comprising a detecting device for detecting an amount of linear movement of the moving body; and a control circuit for controlling a position of the moving body in accordance with the amount of linear movement detected by the detecting device.

41. An electronic device comprising: a linear motion mechanism according to claim 36; and a load member disposed on the moving body of the linear motion mechanism.

42. A linear motion mechanism comprising:

sub.
B3
a supersonic motor having a shaft, a vibrating body supported by the shaft, a piezoelectric element having an electrode pattern and being driven by a voltage signal to undergo expansion and compression movement to vibrationally drive the vibrating body, and a rotor disposed on the vibrating body for undergoing rotation about a longitudinal axis of the shaft in accordance with vibration of the vibrating body;

a first transmission member connected to the rotor for rotation therewith;

a second transmission member having a first end portion for contacting the first transmission member and a second end portion, the second transmission member being

mounted for undergoing pivotal movement about a pivoting point disposed between the first and second end portions;

*sub.
B3
end.*

a moving body for contacting the second end portion of the second transmission member upon pivotal movement thereof to undergo linear movement in a direction crosswise to the longitudinal axis of the shaft in accordance with rotation of the first transmission member; and

a pressurizing mechanism for pressing the moving body into pressure contact with the second end portion of the second transmission member.

43. A linear motion mechanism according to claim 42; wherein the moving body has a projecting portion for contacting the second end portion of the second transmission member.

44. A linear motion mechanism according to claim 42; further comprising a detecting device for detecting an amount of linear movement of the moving body; and a control circuit for controlling a position of the moving body in accordance with the amount of linear movement detected by the detecting device.

45. An electronic device comprising: a linear motion mechanism according to claim 42; and a load member disposed on the moving body of the linear motion mechanism.

Pub.
B4
cont.

46. A pivotal motion mechanism comprising:

a supersonic motor having a shaft, a vibrating body supported by the shaft, a piezoelectric element having an electrode pattern and being driven by a voltage signal to undergo expansion and compression movement to vibrationally drive the vibrating body, and a rotor disposed on the vibrating body for undergoing rotation about a longitudinal axis of the shaft in accordance with vibration of the vibrating body;

a transmission member connected to the rotor for rotation therewith;

a moving body mounted for undergoing pivotal movement about a pivot point in accordance with rotation of the transmission member; and

a pressurizing mechanism for pressing the moving body into pressure contact with the transmission member.

47. A linear motion mechanism according to claim 46; further comprising a detecting device for detecting an amount of pivotal movement of the moving body; and a control circuit for controlling a position of the moving body in accordance with the amount of pivotal movement detected by the detecting device.

48. An electronic device comprising: a pivotal motion mechanism according to claim 46; and a load member disposed on the moving body of the pivotal motion mechanism.

49. A linear motion mechanism comprising:

*Sub.
B5*

a supersonic motor having a shaft, a vibrating body supported by the shaft, a piezoelectric element having an electrode pattern and being driven by a voltage signal to undergo expansion and compression movement to vibrationally drive the vibrating body, a rotor disposed on the vibrating body for undergoing rotation about a longitudinal axis of the shaft in accordance with vibration of the vibrating body, and a first pressurizing mechanism for pressing the vibrating body into pressure contact with the rotor;

a rotational body connected to the rotor for rotation therewith, the rotational body having a tapered portion varying in thickness along a direction generally perpendicular to the longitudinal axis of the shaft;

a moving body having a projecting portion for contacting the tapered portion of the rotational body to undergo linear movement in a direction generally parallel to the longitudinal axis of the shaft in accordance with rotation of the rotational body;

a second pressurizing mechanism for pressing the projecting portion of the moving body into pressure contact with the tapered portion of the rotational body;

a support member for supporting the supersonic motor; and

a guide member mounted on the support member for guiding the linear movement of the moving body.

50. A linear motion mechanism comprising:

a support member;

a shaft mounted on the support member;

a vibrating body for undergoing vibration;

a stator mounted on the support member for vibrating the vibrating body;

a rotor disposed on the vibrating body for undergoing rotation about a longitudinal axis of the shaft in accordance with vibration of the vibrating body;

a first pressing member for pressing the rotor into pressure contact with the vibrating body;

a rotational body connected to the rotor for rotation therewith, the rotational body having a tapered portion varying in thickness along a direction generally perpendicular to the longitudinal axis of the shaft;

a moving body having a projecting portion for contacting the tapered portion of the rotational body to undergo linear movement toward and away from the support member in a direction generally parallel to the longitudinal axis of the shaft in accordance with rotation of the rotational body;

a moving member connected to the moving body for undergoing linear movement therewith;

a guide member mounted on the support member for guiding the linear movement of the moving body and the moving member; and

a second pressing member for pressing the projecting portion of the moving body into pressure contact with the tapered portion of the rotational body;

IN THE DRAWINGS:

Submitted herewith are copies of Figs. 3 and 7-9 on which have been marked in red proposed drawing revisions. Upon approval of the drawing revisions and allowance off the application, the formal drawings will be accordingly revised.

IN THE ABSTRACT:

Delete the abstract now of record and insert therefor the new abstract submitted herewith on a separate sheet.

ADDITIONAL FEE:

Submitted herewith is a check in the amount of \$84.00 to cover the fee for one (1) extra independent claim in excess of those already paid for. Should it be determined